

Measurement, Reporting and Verification (MRV) of the JCM

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Overview of JCM MRV Support



**Support
by IGES**

Methodology development:

- Developing draft methodology
- Coordination with governments of both sides to submit necessary documents
- Explanation to the JCM partner countries for further understandings on the proposed methodologies

PDD Development:

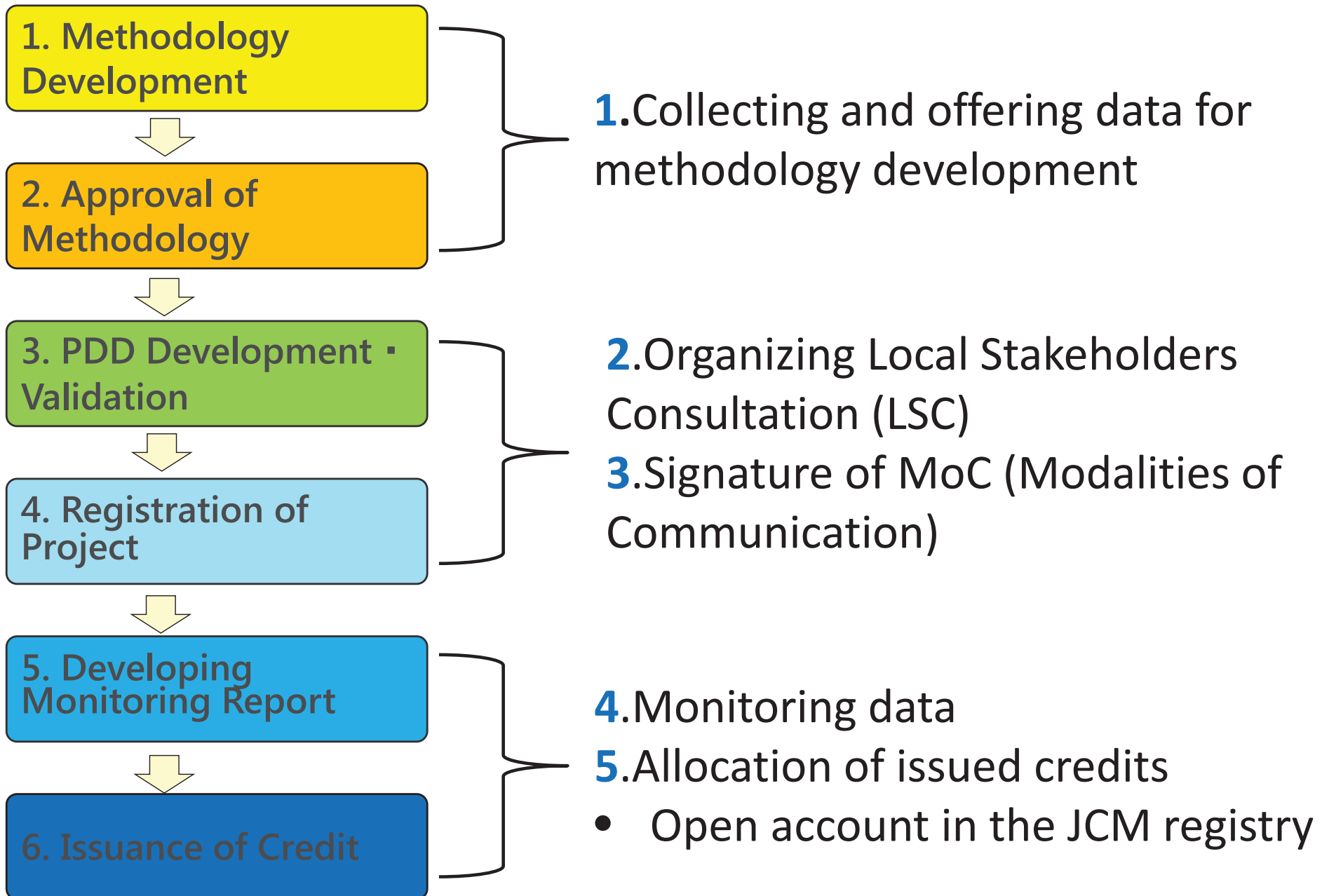
- Developing draft Project design document (PDD)
- Coordination with project participants, Third Party Entities (TPEs) and governments of both sides to submit necessary documents for each procedural step

Monitoring report:

- Developing draft monitoring report
- Coordination with project participants, TPEs and governments of both sides to submit necessary documents for each procedural step

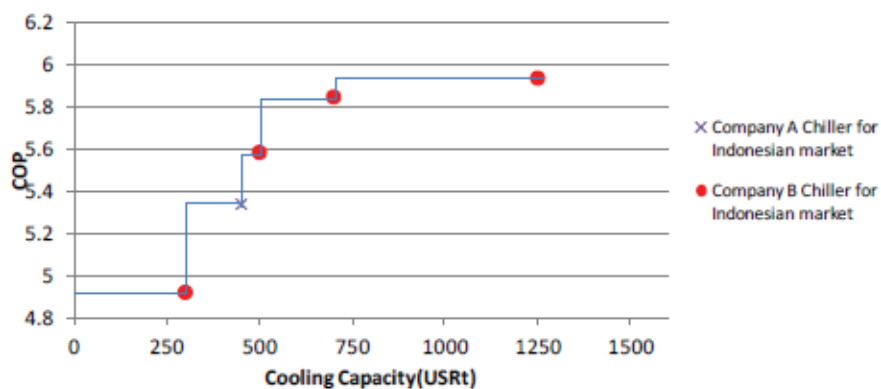
**Support
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Responsibility of project participants in each step



1. Collecting data for methodology development

- Setting default value is a key point in the development of JCM methodology. It is also important to reduce monitoring burdens for project participants.
- For example, it is helpful to collect information and catalogue related to technology which will be similar to a proposed project.
- It is essential to develop JCM methodology by using only monitoring parameters which do not require extra monitoring.



Source : Based on the manufacturer's information, Indonesian power specification etc., the above figure was prepared.

Figure 1 : COP Values of Candidate Reference Chillers

- COP values by cooling capacity were collected through investigation. The maximum value of collected COP values was adopted for reference COP. (Indonesia : Chiller Project)

Project Design Document (PDD) Development

- Emission reductions are calculated by spreadsheet automatically.
- Main point in PDD development is explanation of result of LSC.
 - ✓ The objective of LSC is to explain about project to relevant local stakeholders.
 - ✓ The scheme of the JCM is not necessarily explained in LSC.
- Since PDD form is simple, PDD can be developed in a short term except for the information related to LSC.

Necessary information for PDD

- 1) Overview of project & technology
- 2) Location of project
- 3) Starting date of project operation
- 4) Amount of emission reduction
- 5) Monitoring point and structure
- 6) Result of LSC
- 7) EIA (if applicable)

JCM_ID_F_PDD_ver01.0

JCM Project Design Document Form

A. Project description

A.1. Title of the JCM project

A.2. General description of project and applied technologies and/or measures

A.3. Location of project, including coordinates

Country	
Region/State/Province etc.	
City/Town/Community etc.	
Latitude, longitude	

A.4. Name of project participants

The Republic of	
Indonesia	
Japan	

A.5. Duration

Starting date of project operation	
Expected operational lifetime of project	

A.6. Contribution from developed countries

Monitoring Plan Sheet (Input Sheet) (Attachment to Project Design Document)

Table 1: Parameters to be monitored on-site

Monitoring point No.	Parameters	Description of data	Estimated value	Units	Monitoring option	Source of data	Measurement methods and procedures	Monitoring frequency	Other comments
(1)	SEEG-P	Total quantity of the electricity generated in the project during the period	0.00	MWh/yr	Option C	Measured data	The AC output of the inverters is measured to determine the amount of net electricity generation by the solar PV system. The reading is taken from an electricity meter at the inverter. The reading is taken manually, or electronically using a data logger. The electricity meter is certified by an entity accredited under international standards. The quantity meter is repaired or tested for accuracy at an interval following the regulations in the country to which the electricity meter is commonly used or according to the manufacturer's recommendation. The electricity meter is calibrated or replaced when it fails to pass the test.	Monthly recording	N/A

Table 2: Project-specific parameters to be fixed on-site

Parameters	Description of data	Estimated value	Units	Source of data	Other comments
EF _{grid}	Reference CO ₂ emission factor of grid and/or captive electricity	0.318	CO ₂ /kWh	The default emission factor is derived from the result of the survey on the generation efficiency of major natural gas-fired power plants in Thailand. The default value should be revised if necessary from survey result which is conducted by the JIC or project participants.	N/A

Table 3: Same estimation of CO₂ emission reductions

CO ₂ emission reductions	Units
ICDip	ICDip

Monitoring option

Option A: Based on public data which is measured by entities other than the project participants. Data used: public, recorded data such as statistical data and specifications.
 Option B: Based on the amount of generation which is measured directly using transaction equipment. Data used: commercial or internet such as division.
 Option C: Based on the actual measurement using transaction equipment. Data used: measured value.

PDD Form and Spreadsheet

2. Local Stakeholders Consultation (LSC)

Necessary actions for LSC by Project Participants

1. Selection of potential participants
 2. Coordination to decide date and venue
 3. Preparation of materials for explanation of project
- It is important to communicate and coordinate early with project participants and governments.



Photo: LSC in the JCM project (ID005)

The following record will be required at validation process.

- Material used for explanation of project at LSC
 - Minutes of LSC in English
- Note: In particular, comments from participants
- List of participants with signature (not mandatory)
 - Photos of LSC (not mandatory)

Example of participants for LSC

- Project Participants
- Local Government Officials
- Regional chamber of commerce
- JCM secretariat

3. Signature of Modalities of Communication (MoC)

- MoC is a form to designate a focal point of each project participant for communication with the JCM secretariat and Joint Committee (JC).
- Signatures of primary and alternative persons are necessary in the form.
- Signature of a project participant in host country is also needed.

JCM_MN_F_MoC_ver02.0

Section 5: Contact information (Project participant(s) other than focal point entity)	
Project Participant (1)	
Name of entity:	
Address (incl. postcode):	
Telephone:	Fax:
E-mail:	Website:
Primary authorised signatory:	Mr. <input type="checkbox"/> Ms. <input type="checkbox"/>
Last name:	First name:
Specimen signature:	Date: dd/mm/yyyy
Alternate authorised signatory:	Mr. <input type="checkbox"/> Ms. <input type="checkbox"/>
Last name:	First name:
Title:	
Specimen signature:	Date: dd/mm/yyyy
Contact person:	Mr. <input type="checkbox"/> Ms. <input type="checkbox"/>
Last name:	First name:
Title:	
Department:	
Mobile:	Direct tel.:
E-mail:	Direct fax:
USE THIS SECTION FOR POST-REGISTRATION SUBMISSIONS ONLY	Is this entity changing its name? Yes <input type="checkbox"/> (Former entity name:) No <input type="checkbox"/>

*Tables may be added, as needed

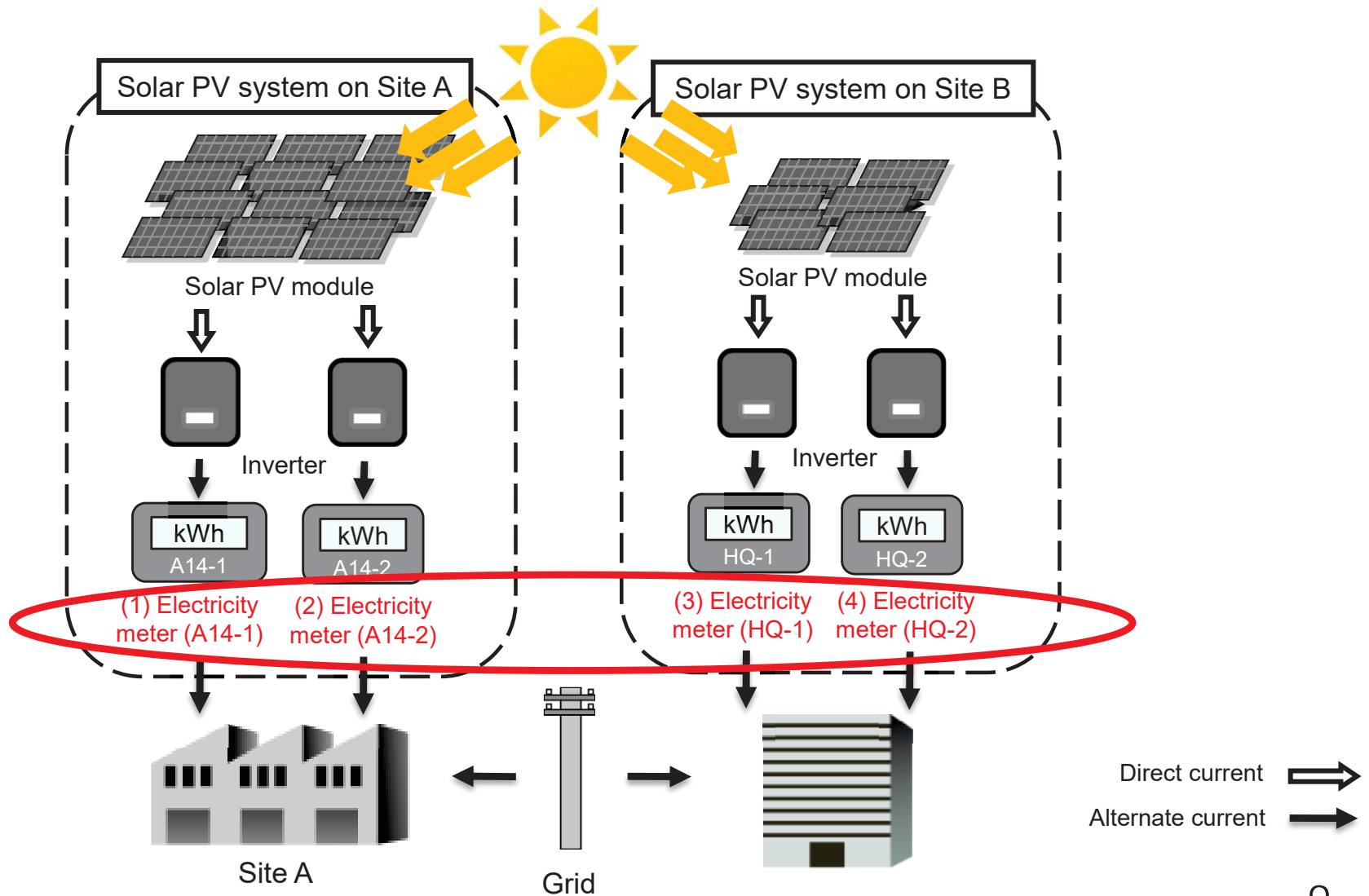
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4. Monitoring data Case Study: Monitoring of Solar PV Project



Monitoring Parameter: MN_AM003

Monitoring parameter : quantity of electricity generated by the project solar PV system(s)



5. Allocation of issued credits

- Projects supported by the JCM financial programme are required to provide more than 50% of issued credits to Japanese government.
- Allocation of remaining credits is decided between Mongolian government, project participants from Japan and Mongolia.
- Since Mongolian government will also acquire credits, close coordination with both governments is helpful for project participants.
- Project participants are required to open an account in JCM registry in advance. The account numbers of project participants are necessary for completing the JCM credit issuance form.

JCM_VN_F_Iss_Req_ver02.0

Total verified emission reductions and allocation of credits (tCO₂e) among project participants and/or both sides

	Total verified emission reductions (tCO ₂ equivalent)	Name and account number of project participants				Both sides	
		Name: Account number:	Name: Account number:	Name: Account number:	Name: Account number:	Vietnamese side	Japanese side
Registry		<input type="checkbox"/> Vietnamese side <input type="checkbox"/> Japanese side	<input type="checkbox"/> Vietnamese side <input type="checkbox"/> Japanese side	<input type="checkbox"/> Vietnamese side <input type="checkbox"/> Japanese side	<input type="checkbox"/> Vietnamese side <input type="checkbox"/> Japanese side		
2013							
2014							
2015							
2016							
2017							
2018							
2019							
2020							
Total							

Account Number

Amount of allocation credit for government

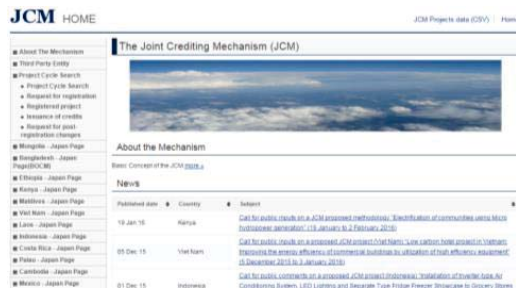
Source : JCM Credit Issuance Request Form ver04.0 (Japan- Mongolia)

For further information

Official JCM Webpage

<https://www.jcm.go.jp/>

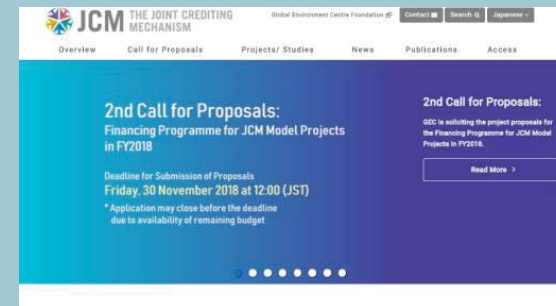
Content: rules and guidelines, JCM methodology, projects



GEC website

<http://gec.jp/jcm/>

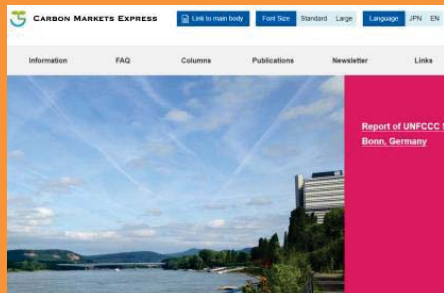
Content: call for proposals, financial and project development, feasibility study, JCM booklet



Carbon Markets Express

<https://www.carbon-markets.go.jp/eng/>

Content: recent development of the JCM



IGES JCM Database

<https://pub.iges.or.jp/pub/iges-joint-crediting-mechanism-jcm-database>

Content: details of methodologies, projects, feasibility studies

Project reference number	Status	Project title	Region	Host Country	Project Participant (Lead Country)	Project Participant (Host)	Type of Project	Supplemental Information
0001	RD	Energy Saving for Air Conditioning and Process Cooling in 10 Industry High-efficiency Certificate Center	Asia	Indonesia	PT Pertamina Indonesia	Nippon Kasei Co., Ltd. (Japan), Mitsui Bussan Kaisha Ltd. (Japan), Singapore & Indonesia CA, Ltd.	Energy efficiency	Public
0002	RD	Project of introducing high efficiency refrigerator to a food industry: Cold Storage in Indonesia	Asia	Indonesia	PT. Indo Global Food Support JTC (Japan/Indonesia)	INDONESIA MFC CO., LTD.	Energy efficiency	Public
0003	RD	Project of introducing high efficiency refrigerator to a food processing plant in Indonesia	Asia	Indonesia	PT. Indo Global Food Support JTC (Japan/Indonesia)	INDONESIA MFC CO., LTD.	Energy efficiency	Public
00011	RD	Installation of high efficiency heat rate boiler in 10th School of Indonesia CA Project	Asia	Singapore	KAJUSERVICE CO., LTD.	SAURAHADAMU CO., LTD.	Energy efficiency	Commercial & household
00012	RD	Installation of heat exchanger system to installation of high efficiency heat rate boiler in 10th School Project	Asia	Singapore	KAJUSERVICE CO., LTD.	SAURAHADAMU CO., LTD.	Energy efficiency	Commercial & household

**Thank you for your kind
attention!**